REMARKS

Examiner N. Berezny is thanked for his thorough examination of the Prior Art. Applicant has amended all claims as kindly suggested by the Examiner.

The independent claim 1 has been amended as follows, no new matter has been added to the application by this modification:

- the statement "the top level metal being separated by intra-layer of dielectric" has been replaced with the statement "the surface of said insulating film being partially exposed", this more correctly indicates the cross section that is shown in Fig. 8 and does not introduce new matter to the application
- the fact that the deposition of the passivation layer comprises the deposition of two layer of passivation has been highlighted in the claim by stating that "said passivation layer comprising a first and a second passivation layer"; no new matter has been added to the application by this addition
- the fact that the layer of polyimide is etched first and before the etching of the passivation layer is further emphasized by adding the statement "said patterning and etching of said passivation layer to take place after said patterning and etching of said layer of photosensitive

polyimide"; no new matter has been added to the application by this addition

- the fact that the layer of polyimide is cured and cross-linked after the passivation layer has been patterned and etched is further emphasized by adding the statement "said curing and cross-linking of said photosensitive polyimide to take place after said patterning and etching of said passivation layer"; no new matter has been added to the application by this addition.

Dependent claims 5, 8, 15 and 16 have been changed to avoid problems of antecedent basis or to correct minor errors.

No new matter has been introduced to the application by the above indicated changes to the specification.

Reconsideration of the objection to the drawings as failing to comply with 37 CFR 1.84(p)(5) is requested, based on the following.

Reference #10 has been added to the specification on page 16, fourth paragraph. This further corrects drawings 8 and 9.

Reconsideration of the objection to the disclosure because of various informalities is requested.

The informalities have now been corrected.

Reconsideration of the objection to the specification as failing to proper antecedent basis is requested based on the following.

Amendments have been provided to claim 1 in order to establish sufficient antecedent basis for the limitations of claims 13, 17, 18, and 20. The claims have been carefully reviewed and amended to correct those problems the Examiner pointed out, in addition to others. All claims are now believed to be in allowable condition.

The conflict between the two curing cycles, regarding claims 19 and 30, has been removed by removing the second paragraph from page 18, this paragraph specified one of the conflicting curing cycles. By removing this curing cycle, the conflict has been resolved while not introducing new matter into the specification.

In comparing the independent claim 1 with independent claims

1 and 13 of Fu et al. (US Patent 5,807,787) the following differences are apparent:

- Fu et al. address only bonding pads, the instant invention addresses bonding pads that are provided on the surface of a substrate concurrent with interconnect lines; the difference is significant since, in forming a thick layer of passivation (for improved protection of the underlying components) in the era of sub-micron devices and the therewith used closely spaced interconnect lines, keyholes between interconnect lines are a problem since the thick layer of passivation (typically deposited by depositing two layers of passivation) does not readily penetrate between narrowly spaced adjacent interconnect lines. For a typical process of etching (a passivation layer in order to expose a bonding pad), photoresist is used which, where keyholes are present, penetrates the keyholes and, during subsequent high temperature processing, violently reacts to the high temperatures and "explodes" from the keyholes causing significant disturbance to the process of device formation. This is to be prevented, the present invention prevents this by using a thick layer of polyimide whereby the polyimide readily penetrates any keyholes that may have formed between adjacent, closely spaced interconnect lines. With the invention, bond pads can be created within incurring

processing damage by photoresist remnants that in conventional processing penetrates into keyholes between closely spaced interconnect lines

- Fu et al. deposit a layer of passivation and etch this layer (exposing the surface of the bonding pad) before depositing a layer of polyimide. The instant invention deposits the (two layers of) passivation over which the layer of polyimide is deposited. After these layers have been deposited, the polyimide is etched after which the layer of passivation is etched. The difference in sequence is significant because the instant invention first provides protection to the interconnect lines after which a bonding pad is created. Fu et al. create a bonding pad by first creating an opening in the layer of passivation (exposing the bonding pad) after which a layer of polyimide is deposited. The layer of polyimide contacts the surface of the bonding pad, the layer of polyimide is etched again exposing the bonding pad. The etch of the polyimide leaves polyimide in place over the surface of the bonding pad (Fu et al., col. 6, line 1 e.a.) which is further removed with the additional step of oxide ashing (Fu et al, see table in col. 6, lines 6-14)
- to assure the desired processing sequence, the instant invention has added statements to this effect to claim 1.

Independent claim 20 has been provided in order to connect a bond pad to interconnect wiring that has been created in or on a semiconductor surface. Independent claim 20 has been similarly changed, that is:

- the statement "said wiring and said bond pads being separated by intra-layer of dielectric" has been replaced with the statement "the surface of said insulating film being partially exposed", this more correctly indicates the cross section that is shown in Fig. 8 and does not introduce new matter to the application
- the term "top level metal interconnect lines" has been replaced with the term "wiring layer"; no new matter has been added to the application by this change
- the term "top level metal bond pads" has been replaced with "bond pad metal"; no new matter has been added to the application by this change
- the term "partially removing said photosensitive polyimide from above the surface of said bond pads" has been introduced to remove any questions regarding the preceding (in the same clause) "said pattern being identical to the pattern of said bond pads"; no new matter has been added to the application by this addition

- the term "photosensitive polyimide" in the clause starting with "etching said layer of photosensitive polyimide" has been changed to "passivation", correcting an error in claim 20 and bringing claim 20 in accordance with the processing sequence that has been detailed in the specification; no new matter has been added to the application by this change
- the fact that the layer of polyimide is etched first and before the etching of the passivation layer is further emphasized by adding the statement "said patterning and etching of said passivation layer to take place after said patterning and etching of said layer of photosensitive polyimide"; no new matter has been added to the application by this addition
- the fact that the layer of polyimide is cured and cross-linked after the passivation layer has been patterned and etched is further emphasized by adding the statement "said curing and cross-linking of said photosensitive polyimide to take place after said patterning and etching of said passivation layer"; no new matter has been added to the application by this addition.

The comments that have previously been provided and that compare the Fu et al. patent with the instant application equally apply to the amended claim 20 and will therefore, to

avoid repetition, not be repeated at this time. Claim 20 extends the invention to bond pads that are connected to interconnect wiring, for these bond pads the invention is also valid. Dependent claims 21-23, 25, 27 have been changed to avoid problems of antecedent of the remove redundant statements from these claims, claim 26 has been cancelled.

Regarding the issue of Double Patenting as brought forward by Examiner and the rejection based thereon, it must be pointed out that the claims have been amended and are no longer coextensive in scope with the claims of the issued patent.

Favorable reconsideration of this application in light of the above amendments and the following remarks is respectfully requested.

The invention teaches the deposition of a pattern of interconnecting lines and bond pads. Passivation layers are deposited over this metal pattern. A layer of photosensitive polyimide is deposited over the passivation layers. This layer of photosensitive polyimide is patterned, exposed and developed, the passivation layer is patterned and etched to expose the underlying bonding pads. The remaining polyimide is cured and

cross-linked and remains in place to serve as a buffer during further device packaging.

Claim rejections - 35 U.S.C. § 112

Reconsideration of the rejection of claims 13, 17, 18, 20, 19 and 30 under U.S.C § 112, second paragraph, is requested based on the following.

The Examiner is thanked for pointing out the various antecedent basis problems in the claims. Amendments have been provided to claim 1 in order to establish sufficient antecedent basis for the limitations of claims 13, 17, 18, and 20. The claims have been carefully reviewed and amended to correct those problems the Examiner pointed out, in addition to others. All claims are now believed to be in allowable condition.

Reconsideration of the rejection of claim 19 and 30 under U.S.C 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention is respectfully requested based on the amendments that have been provided to the text in addition to the amendments that have been made to claims 1 and 20. The amendments to the claims have eliminated one of

the two processing conditions for the performance of the curing and cross-linking of the photosensitive polyimide thus eliminating any potential conflict between these processing conditions. The amendments that have been provided to claims 1 and 20 specifically identify at what time in the processing sequence of the invention the curing and cross-linking of the photosensitive polyimide is to take place thus eliminating any doubt over whether this curing process should be performed before or after the patterning and etching of the passivation layer.

In light of the foregoing response, applicant respectfully requests that the Examiner's rejection of claims 13, 17 and 20, 19 and 20 under U.S.C § 112, second paragraph be withdrawn.

Double Patenting.

Reconsideration of the rejection of claims 1,2,3,4,8,9,10,11,13,16,17,18,19,20,21,22,23,25,26,28,29 and 30 under U.S.C 102(g) and possibly 35 U.S.C. 102(f) as being directed to the same invention as that of claims 1,6,8,14,2,3,16,7,1,1,8,1,1,1,1,(1,6,7 and 8),14,2,(3 and 16),1,1,1,1 and 9 respectively is requested based on the following.

In order to address the issue of Double Patenting, the processing steps of the invention and the processing steps of US Patent 5,807,787 (Fu et al.) will be highlighted at this time, this overview will allow for comparison between the two methods.

The instant invention:

- starts with a semiconductor surface, typically the surface of a semiconductor substrate, over which a pattern of metal has been created, including interconnect lines and bonding pads
- a first layer of passivation is deposited over the semiconductor surface including the surface of the metal patterns
- a second layer of passivation is deposited over the first layer of passivation
- a thick layer of polyimide is deposited over the surface of the second layer of passivation
- the thick layer of polyimide is patterned and etched creating openings in the layer overlying the surface of the bonding pads, leaving the polyimide in place above the interconnect line pattern,
- the layers of passivation are etched, exposing the surface of the bonding pads, and

- the thick layer of polyimide is cured and cross-linked in order to provide improved protection for the interconnect metal.

US Patent 5,807,787 (Fu et al.), essentially following Fig. 2 and the thereby provided specification:

- start with a semiconductor surface, typically the surface of a semiconductor substrate, over which a pattern of bonding pads has been created; Fu et al. use an insulation layer over which the metal patterns are created
- a first layer of passivation is deposited over the semiconductor surface including the surface of the bonding pads; this layer is typically between 7000 and 12000 Angstrom thick (col. 5, line 24)
- openings are etched in the first layer of passivation, exposing the surface of the bonding pads (col. 5, lines 25)
- a second layer of passivation is deposited, the second passivation layer is typically polyimide (col. 5, line 38), with a thickness between 9.0 and 12.0 um
- the second layer of passivation is exposed to UV light resulting in cross linked polyimide (the polyimide that is exposed by the UV light) and polyimide (that is not exposed by the UV light) that can be dissolved away; this results in

creating openings in the layer of polyimide that expose that surface of the contact pads (col. 5, lines 60-65)

- residual polyimide is removed by oxygen plasma ashing (col. 5, line 67), the residual polyimide caused problems of poor contact resistance with the bonding pads (col. 6, which 2) which in turn has a negative impact on product yield, and
- after the plasma ashing, the surface of the substrate to a thermal treatment to eliminate surface leakage currents (col. 6, lines 43 and 48).

Comparing the two methods, the following differences can be observed:

- Fu et al. reduce (by heat treatment) the leakage current that typically occurs over the surface of a layer of polyimide in applications where a layer of polyimide is used as the second layer of passivation; the present invention uses a layer of polyimide that is deposited over the surface of a second layer of passivation and heat treatment of the layer of polyimide to provide improved protection for underlying layer of interconnect metal
- Fu et al. address the reduction of leakage currents between bonding pads (col. 2, lines 40, 47, 49, 54) for applications where a layer of polyimide is used as a passivation layer;

the present invention provides a method for forming bonding pads at the same time that interconnect lines are created, these interconnect lines may be in close proximity to the bonding pads

- for the electrical insulation between the bonding pads and the interconnect lines, the present invention uses a thick layer of polyimide and heat treats this thick layer of polyimide resulting in improved surface characteristics of the layer of polyimide and improving the electrical insulation between the bonding pads and the interconnect lines
- the present invention addresses the concern of residual photoresist that accumulates in keyholes between adjacent interconnect lines by providing a thick layer of polyimide overlaying the interconnect line pattern, thereby eliminating the conventional use of SOG that typically is used to prevent the occurrence of keyholes between adjacent interconnect lines; Fu et al. are silent on this issue
- Fu el al. use relatively thick layers of passivation (7000 to 12000 Angstrom for the first layer of passivation and 9.0 to 12.0 um for the second layer of polyimide); these thick layers of passivation are required, particularly for the second layer of polyimide, in order to gain enough surface region so that the thermal treatment can affect enough

polyimide resulting in satisfactory reduction in the leakage currents between bonding pads

- the invention uses two relatively thin layers of passivation over which a thick layer of polyimide is deposited; the layer of polyimide of the invention is thick in order to provide adequate protection against surface damage for the underlying interconnect lines
- the invention does not use oxygen plasma ashing after the layer of polyimide has been patterned and etched
- Fu et al. etch the layer of passivation, exposing the surface of the bonding pad, then deposit a layer of polyimide (referred to by Fu et al. as the second layer of passivation), then etch the layer of polyimide and heat treat the layer of polyimide; by contrast, the instant invention deposits the (two layers of) passivation, deposit a layer of polyimide over the layer of passivation, etch the layer of polyimide then etch the layer of passivation, then heat treat the remaining polyimide. The difference in the sequence between the two inventions is not incidental: Fu et al. create (a relatively large) surface area of polyimide that is improved (reducing the leakage current across this surface area) by heat treating the polyimide. Fu et al. reduce leakage current between adjacent bonding pads (ABSTRACT). The instant invention provides for creating interconnect lines

and bonding pads on the same surface and simultaneously, providing low contact resistance to the bonding pad, providing a thick layer of passivation over the interconnect lines (that are adjacent to the bond pads), further protecting the underlying interconnect lines with a thick layer of polyimide. In the process, the instant invention has eliminated the conventional problems of residual photoresist that typically is used for the etching of bond pads by providing a thick layer of polyimide that overlays the passivation layer and that fills any keyholes that typically are present between adjacent interconnect lines, especially where these interconnect lines are created for sub-micron device features (closely spaced interconnect lines).

In sum: both Fu et al. and the present invention use polyimide and apply heat treatment to the surface of the deposited polyimide. Other than that, there is no commonality between Fu et al. and the present invention. Fu et al. reduces leakage currents between bonding pads by creating a thick layer of polyimide between the bonding pads (under which one layer of passivation have been deposited and patterned to expose the bonding pads) and heat treating this layer of polyimide. The present invention creates a bonding pad that is adjacent to interconnect lines, uses two layers of passivation over the

interconnect lines and provides low resistivity access to a bond pad concurrent with protection for the interconnect lines with a thick layer of polyimide.

In light of the foregoing response, applicant respectfully requests that the Examiner's rejection of claims 1,2,3,4,8,9,10,11,13,16,17,18,19,20,21,22,23,25,26,28,29 and 30 under U.S.C 102(g) and possibly 35 U.S.C. 102(f) as being directed to the same invention as that of claims 1,6,8,14,2,3,16,7,1,1,8,1,1,1,1,(1,6,7 and 8),14,2,(3 and 16),1,1,1,1 and 9 be withdrawn.

Claim rejections - 35 U.S.C. § 102

Reconsideration of the rejection of claims 1-5, 8-11, 13, 16-26, and 28-30 under U.S.C. 102(e) as being anticipated by Fu et al. (US Patent 5,807,787) is requested base on the following.

Fu et al. (US Patent 5,807,787):

- Fu et al. do not specify that interconnecting lines are provided on the surface of the insulation layer but only address the formation of bonding pads

- Fu et al. do not use two layers of passivation over which the layer of polyimide is deposited but use only one layer of passivation (layer 12, Fig. 2) over which a thick layer of polyimide is deposited; Fu et al. use a first layer of passivation that can contain silicon dioxide and that is deposited to a thickness between 7000 and 12000 Angstrom; where Fu et al. refer to a second layer of passivation, this is the layer of polyimide (layer 14, fig. 2) that is deposited and treated for a layer of inter metal dielectric between bonding pads
- most significantly, Fu et al. etch the first layer of passivation after this layer has been deposited and before the thick layer of polyimide is deposited, thereby exposing the bond pad surface to poor contact resistance with a resulting yield loss, as stated in Fu et al. col. 6, lines 2-3, see Fig. 2 .The invention by contrast first deposits two layers of passivation over which a layer of polyimide is deposited. The layers of passivation are therefore interposed between the surface of the bond pad and the layer of passivation, making it impossible for any polyimide remnants to be present on the surface of the bond pad after the polyimide is etched for the creation of an opening to the bond pad; the invention therefore eliminates exposure to

remnants of polyimide on the surface of the bond pad and removes any potential negative yield impact

- Fu et al. and the invention specify the deposition of a 5.0 to 9.5 um thick layer of polyimide; Fu et al. deposit the polyimide over the first layer of passivation after this layer has been patterned and etched, exposing the surface of the bonding pads; the present invention deposits the layer of polyimide over a second layer of passivation and after this removes the polyimide and the passivation from above the surface of the bonding pad, leaving polyimide and passivation in place above the interconnect wiring
- Fu et al. and the present invention cure and cross link the deposited layer of polyimide.

To further clarify the differences between Fu et al. and the present invention, the following points will as yet be made:

- Fu et al. create a thick layer of polyimide between polyimide so that enough polyimide surface is available between bonding pads so that, upon curing and cross linking, long enough paths of cured and cross linked polyimide is present between bonding pads, reducing or eliminating leakage currents between the bonding pads
- the "surface effect" of the thick layer of polyimide of Fu et al. is further enhanced by stretching the surface between

bonding pads even further by the selection of a relatively thick first layer of passivation (7000 to 12000 Angstrom); this as compared with a combined thickness of the first and second layer of passivation of the invention of about 9000 Angstrom; a current leakage path must first transcend the exposed surface of the layer of passivation after which the surface of the heat treated polyimide comes into effect

- in order to improve performance of a layer of passivation over interconnecting lines, two layers of passivation are frequently deposited, that is a second layer deposited over a first layer; for sub-miniature device features and for very small line spacings, this leads to problems of key hole formation between the interconnect lines and subsequent poor planarity of overlying photoresist that is used for the etching of a layer of passivation to expose bonding pads; this poor planarity of the photoresist results in over-etching of the second layer of passivation, having a negative effect on the effectiveness of the combined layer of passivation (see Fig. 6 of the specification)
- Fu et al. use an oxide ashing in order to remove remnants of etched polyimide from the surface of the exposed bonding pads (col. 6, line 1 e.a.). The instant invention does not need to apply oxide ashing for this purpose. The reason for this becomes readily apparent by comparing Fig. 2 of Fu et al.

with Figs. 8 and 9 of the instant invention. The difference is, among others, that under Fu et al. the deposited polyimide touches the underlying surface of the bonding pad. Therefore, after etching of the layer of polyimide, polyimide may as yet not have been fully removed from the surface of the bonding pad causing problems of high resistivity to the bonding pad (Fu et al. col. 6, line 1 e.a.). For the present invention, the overlying layer of polyimide never touches the underlying contact pad, there can therefore never be any residual polyimide on the surface of the bonding pad making oxide ashing for the removal of polyimide unnecessary.

Regarding claim 1 and 20, these claims have been amended to describe the invention in detail. Since all the claims within this rejection are dependent upon amended claims 1 and 20 and carry all of the limitations of amended claims 1 and 20, applicant additionally asserts that those remaining claims may not also properly be rejected under U.S.C. 102(e) as being anticipated by Fu et al. (US Patent 5,807,787) for reasons cited by the examiner.

In light of the foregoing response, applicant respectfully requests that the Examiner's rejection of claims 1-

5, 8-11, 13, 16-26, and 28-30 under U.S.C. 102(e) as being anticipated by Fu et al. (US Patent 5,807,787) be withdrawn.

Claim rejections - 35 U.S.C. § 103

1. Reconsideration of the rejection of claims 12 and 27 under 35 U.S.C. 103(a) as being unpatentable over Fu et al. in view of Yamamoto (US Patent 5,013,689) is requested base on the following.

Fu et al.:

- Fu et al. are silent on the type of insulating material that is used over which bonding pads are created, Fu et al. do not specify that the insulating layer (layer 10, Fig. 2) comprises silicon dioxide
- Fu et al. do not specify that interconnecting lines are provided on the surface of the insulation layer but only address the formation of bonding pads
- Fu et al. do not use two layers of passivation over which the layer of polyimide is deposited but use only one layer of passivation (layer 12, Fig. 2) over which a thick layer of polyimide is deposited; Fu et al. use a first layer of passivation that can contain silicon dioxide and that is deposited to a thickness between 7000 and 12000 Angstrom;

where Fu et al. refer to a second layer of passivation, this is the layer of polyimide (layer 14, Fig. 2) that is deposited and treated for a layer of inter metal dielectric between bonding pads

- Fu et al. etch the first layer of passivation after this layer has been deposited and before the thick layer of polyimide is deposited, see Fig. 2
- Fu et al. and the present invention specify the deposition of a 5.0 to 9.5 um thick layer of polyimide, Fu et al. deposit the polyimide over the first layer of passivation, the present invention deposits the layer of polyimide over a second layer of passivation
- Fu et al. use oxide ashing to remove polyimide remnants from above the bonding pad after the layer of polyimide has been etches
- Fu et al. and the present invention cure and cross link the deposited layer of polyimide.

Yamamoto provides a method for forming a passivation film that is of such high quality that it can be used for LSI and VLSI applications. Yamamoto first deposits a layer of passivation over a layer of patterned metal that may include interconnect lines and bonding pads. This layer of passivation must be patterned in order to expose the underlying patterned

metal layer, for this purpose a thin layer of organic photoresist is used. The essence of the Yamamoto invention is that the patterned layer of organic photoresist is not removed from the surface of the layer of passivation after the layer of passivation has been etched but is, by means of post-baking, made part of the layer of passivation. This provides a thin surface layer over the layer of passivation that acts as a thin organic over-coating to the layer of passivation. Yamamoto further extends his invention by depositing two layers of passivation, one over the other, before etching and again creating a thin organic film on the surface of the upper layer of passivation by the method indicated. The materials that can be used under Yamamoto for the layers of organic photoresist include polyimide, silicon resin, epoxy resin, and the like. From the highlighted invention of Yamamoto and the previously detail present invention, the following differences can be identified:

- Yamamoto does not provide a method for negating the effect introduced by key-holes between closely spaced lines; the present invention does, as detailed above
- Yamamoto does not provided a method for preventing damage to a second layer of passivation during the process of etching to expose underlying metal surfaces; the instant invention does, as detailed above

- Yamamoto does not provide for a thick layer of polyimide that acts as a protecting layer for underlying interconnect metal; the present invention does
- Yamamoto provides a thin protective organic layer on the surface of one or more layers of passivation, making the layer of passivation into a high quality layer of passivation; the invention uses a thick layer of polyimide on the surface of two layers of passivation for the protection of underlying interconnect lines, and
- Yamamoto is silent on creating bonding pads at the same time that interconnect lines are created; the present invention provides such a method.

None of the applied or known references address the invention as shown in the amended claims in which a thick layer of polyimide is deposited over two layers of passivation that have been deposited over interconnect lines and bonding pads. The invention is believed to be patentable over the prior art cited, as it is respectfully suggested that the combination of these various references of Fu ey al. and Yamamoto cannot be made without reference to Applicant's own invention. None of the applied references address the problem of providing a high quality layer of passivation over interconnect lines at the same time that bonding pads are patterned and etched through layers

of passivation. Applicant has claimed his process in detail. The processes of Figs. 8 and 9 are both believed to be novel and patentable over these various references, because there is not sufficient basis for concluding that the combination of claimed elements would have been obvious to one skilled in the art. That is to say, there must be something in the prior art or line of reasoning to suggest that the combination of these various references is desirable. We believe that there is no such basis for the combination. We therefore request Examiner N. Berezny to reconsider his rejection in view of these arguments and the amendments to the Claims.

Further, since the claims 12 and 27 within this rejection are dependent upon amended claims 1 and 20 and carry all of the limitations of amended claims 1 and 20, applicant additionally asserts that those remaining claims may not also properly be rejected under U.S.C. 103(e) as being unpatentable over Fu et al. (US Patent 5,807,787) for reasons cited by the examiner.

In light of the foregoing response, applicant respectfully requests that the Examiner's rejection of claims 12 and 27 under 35 U.S.C. 103(a) as being unpatentable over Fu et al. in view of Yamamoto (US Patent 5,013,689) be withdrawn.

2. Reconsideration of the rejection of claims 6,7,14, and 15 under 35 U.S.C. 103(a) as being unpatentable over Fu et al. in view of conventional or obvious modifications.

Since the claims 6,7,14, and 15 within this rejection are dependent upon amended claims 1 and 20, which are now believed patentable for the reasons cited above, and carry all of the limitations of amended claims 1 and 20, applicant additionally asserts that those remaining claims may not also properly be rejected under 35 U.S.C. 103(a) as being unpatentable over Fu et al. in view of conventional or obvious modifications.

In light of the foregoing response, applicant respectfully requests that the Examiner's rejection of claims 6,7,14, and 15 under 35 U.S.C. 103(a) as being unpatentable over Fu et al. in view of conventional or obvious modifications be withdrawn.

Other Considerations

No new independent or dependent claims have been written as a result of this office action, no new charges are therefore incurred due to this office action.

SUMMARY

Applicants invention is directed at the deposition of a pattern of interconnecting lines and bond pads. Passivation layers are deposited over this metal pattern. A layer of photosensitive polyimide is deposited over the passivation layers. This layer of photosensitive polyimide is patterned, exposed and developed to expose the underlying bonding pads. The remaining polyimide is cued and cross-linked and remains in place to serve as a buffer during further device packaging. Key to the present invention is that the remaining photosensitive polyimide is not removed after the bond pad has been exposed.

It is requested that should Examiner not find the claims to be allowable that he call the undersigned Attorney at his convenience at 914-452-5863 to overcome any problems preventing allowance.

Respectfully submitted,

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